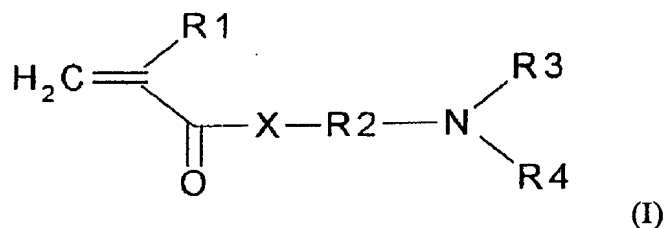


What is claimed is:

1. An antimicrobial polymer obtainable by polymerizing a monomer of the formula I

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where

R1 = -H or -CH₃

10 R2 = branched or unbranched aliphatic hydrocarbon radical having from 1 to 5 carbon atoms,

R3 = H, or branched or unbranched aliphatic hydrocarbon radical having from 1 to 7 carbon atoms,

15 R4 = H, or branched or unbranched aliphatic hydrocarbon radical having from 1 to 7 carbon atoms,

R5 = H, or branched or unbranched aliphatic hydrocarbon radical having from 1 to 7 carbon atoms, and

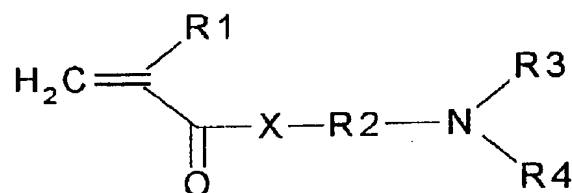
20 X = O, NH, NR5.

2. The antimicrobial polymers as claimed in claim 1, characterized in that the monomer used of the formula I is 2-tert-butylaminoethyl methacrylate, 2-diethylaminoethyl methacrylate, 2-dimethylaminomethyl methacrylate, 2-tert-butylaminoethyl acrylate, 3-dimethylaminopropyl acrylate, 2-diethylaminoethyl acrylate, 2-dimethylaminoethyl acrylate, N-3-dimethylaminopropylmethacrylamide, N-3-diethylaminopropylmethacrylamide, N-3-dimethylaminopropylacrylamide, or N-3-diethylaminopropylacrylamide.
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3. The antimicrobial polymer as claimed in claim 1,

characterized in that
the monomer used of the formula I is 2-tert-butylaminoethyl methacrylate, 2-diethylaminoethyl methacrylate, 2-dimethylaminomethyl methacrylate,
5 2-tert-butylaminoethyl acrylate, 3-dimethylaminopropyl acrylate, 2-diethylaminoethyl acrylate, 2-dimethylaminoethyl acrylate, N-3-dimethylaminopropylmethacrylamide, N-3-diethylaminopropylmethacrylamide, N-3-dimethylaminopropylacrylamide, or
10 N-3-diethylaminopropylacrylamide.

4. An antimicrobial polymer blend,
characterized in that
one or more antimicrobial polymers, each
15 obtainable by polymerizing a monomer of the formula I



where
20 R1 = -H or -CH₃
R2 = branched or unbranched aliphatic hydrocarbon radical having from 1 to 5 carbon atoms,
R3 = H, or branched or unbranched aliphatic hydrocarbon radical having from 1 to 7 carbon
25 atoms,
R4 = H, or branched or unbranched aliphatic hydrocarbon radical having from 1 to 7 carbon atoms,
R5 = H, or branched or unbranched aliphatic hydrocarbon radical having from 1 to 7 carbon
30 atoms, and
X = O, NH, NR5
is mixed with at least one other polymer.

5. The antimicrobial polymer blend as claimed in claim 4,
characterized in that
the polymer blend is composed of from 0.2 to 90%
by weight of one or more antimicrobial polymers.
6. The antimicrobial polymer blend as claimed in claim 4 or 5,
characterized in that
the other polymer used comprises polyurethanes,
polyolefins, polyethylene, polypropylene, poly-
siloxane, polystyrene, polyacrylates, polymethyl
methacrylate, PVC, polyamide or polyterephthalate.
7. The use of the antimicrobial polymers as claimed in any of claims 1 to 3 for producing items for medical technology.
8. The use of the antimicrobial polymers as claimed in any of claims 1 to 3 for producing hygiene items.
9. The use of the antimicrobial polymers as claimed in any of claims 1 to 3 for producing surface coatings, protective paints, or other coatings.
10. The use of the antimicrobial polymers as claimed in any of claims 1 to 3 in biocidal formulations.
11. The use of the antimicrobial polymers as claimed in any of claims 1 to 3 for producing films, tarpaulins, fabrics, or fibers.
12. The use of the antimicrobial polymers as claimed in any of claims 1 to 3 in formulations for ointments or pastes.
13. The use of the antimicrobial polymers as claimed

in any of claims 1 to 3 for producing products with an antimicrobial coating made from the antimicrobial polymer.

- 5 14. The use of the antimicrobial polymer blends as claimed in any of claims 4 to 6 for producing items for medical technology.
- 10 15. The use of the antimicrobial polymer blends as claimed in any of claims 4 to 6 for producing hygiene items.
- 15 16. The use of the antimicrobial polymer blends as claimed in any of claims 4 to 6 in surface coatings, protective paints, or other coatings.
- 20 17. The use of the antimicrobial polymer blends as claimed in any of claims 4 to 6 in biocidal formulations.
- 25 18. The use of the antimicrobial polymer blends as claimed in any of claims 4 to 6 for producing films, tarpaulins, fabrics, or fibers.
- 30 19. The use of the antimicrobial polymer blends as claimed in any of claims 4 to 6 in formulations for ointments or pastes.
- 35 20. A process for sterilizing cooling water streams, which comprises adding antimicrobial polymers as claimed in any of claims 1 to 3 in dispersed form to the cooling water.
21. A process for sterilizing cooling water streams, which comprises adding antimicrobial polymer blends as claimed in any of claims 4 to 6 in dispersed form to the

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cooling water.